Periscope.

EXCERPTS WILL BE FURNISHED AS FOLLOWS:

From the Swedish, Danish, Norwegian and Finnish:
Frederick Peterson, M.D., New York.
From the German:
William M. Leszynsky, M.D., N. Y.
Belle Macdonald, M.D., New York.
From the French:
L. Fiske Bryson, M.D., New York.
G. M. Hammond, M.D., New York.
From the French, German and Italian:
John Winters Brannan, M.D., N. Y.
From the Italian and Spanish:
William C. Krauss, M.D., Buffalo, N. Y.
From the Italian and French:
E. P. Hurd, M.D., Newburyport, Mass.
From the German, Italian, French and Russian:
F. H. Pritchard, M.D.
Albert Pick, M.D., Paris, France.
From the English and American:
A. Freeman, M.D., New York.

ANATOMICAL AND PHYSIOLOGICAL.

SUBSTITUTION IN THE CEREBRAL CORTEX.

The "American Journal of Insanity" reports the work of Professor Gaule in this direction. At a meeting of the Zurich Medical Society a dog was exhibited from which the Professor had extirpated the whole cerebral motor area on both sides, as determined by electrical excitation. After the operation the dog presented the ordinary loss of voluntary movements. His re-education was undertaken by the author, with the result of teaching him to catch pieces of meat thrown to him, to give either paw at command, and to use the paws in digging up buried meat, and so forth. In the discussion which followed, opinions were divided between an incomplete extirpation and the formation of new cerebral connections. The latter was the view held by the exhibitor.

In this same line of study come the labors of Prof. Goltz, as reported by J. M. Langley, in the "Journal of Physiology." The dog, as exhibited before the Physiological Congress, had been deprived of the left half of its cerebrum and left corpus striatum. The animal, if allowed to run freely about the room, tended to move towards the left in large circles, but if called he came in a straight line towards the caller. It was easy to make him move in a circular direction towards the right, if he was attracted by pieces of meat held in front of him. He gazed fixedly at food held before him just in the same way as a normal dog.

The condition of the right eye was that of hemiamblyopia as described by Loeb. The dog could run and walk on his hind legs. In eating and licking, the tongue was moved symmetrically like an uninjured dog. He was very watchful and barked loudly; consequently it was impossible that the right half of the larynx should be paralyzed. When anybody he knew approached him in a friendly way, his exhibitions of pleasure, such as wagging the tail, etc., were perfectly normal. He also used both paws in excavating anything he had buried, and if he was prevented from using the left paw, the right could be used exclusively. Hitzig had stated that if the dog was able to use his right paw as a hand, that some fragment of the left front leg centre had been left, and that this portion had taken upon itself the whole function of the centre. Munk had also asserted that a dog whose so-called motor area, the "Fühlsphäre" of Munk, had been destroyed, remained entirely devoid of sensation in the limbs and other parts of the right half of the body. Tests were made proving that the dog in question had retained his muscular consciousness in the right fore paw, and also that sensibility was intact in other parts of the body.

After the exhibition the dog was killed and the brain submitted for examination. The right hemisphere was found to be uninjured and the left hemisphere almost completely removed. From a closer examination of the remaining fragments, it was found that the only parts of the cortex on the left side which remained in functional connection with the optic thalamus region, or with the lower parts of the brain, were (*a*) a portion of that part of the hippocampal convolution which normally underlaid the corpus callosum, and (*b*) a small area of gray substance in the neighborhood of the optic chiasm. From microscopical examinations of the remainder of the brain substance, it was concluded that removal of the cerebral hemisphere and corpus striatum on one side caused, (*a*) complete degeneration in the nerve cells, and diffuse gray substance of the nuclei of the optic thalamus of the same side, as described by v. Monakow in the new-born rabbits, but a certain number of medullated fibres remained throughout the region of these nuclei. The degeneration spread up to the median line of the soft commissure, but there was no appreciable degeneration of the gray matter ventral to the optic thalamus proper. The gray substance of the third ventrical which laid mesially of the anterior of the tenia of the optic thalamus was smaller than normal, but contained nerve cells. There was some degeneration in the posterior commissure, the habenular ganglion, the tenia of the optic thalamus on the same side, and in both Meynert's bundles. (*b*) Considerable diminution of the gray substance of the aqueduct in the region of the anterior corpus quadrigemina was found. (*c*) Great degeneration of the nerve cells and of the diffuse gray substance of the substantia nigra of the same side. (*d*) There was a slight diminution in the size of the pons on the same side. (*e*) Some atrophy of the nerve cells of the descending root of the fifth nerve existed on the opposite side to the lesion. (*f*) Degeneration of the corpus callosum and of the anterior also existed. The secondary consequences of the removal of the posterior part of the cortex were: (*a*) Complete degeneration of both dorsal and ventral nuclei of the external corpus geniculatum. (*b*) Complete degeneration of the nerve cells and diffuse gray substance of the internal corpus geniculatum, some normal and medullated fibres still remaining in its ventral portion. (*c*) Some degeneration of the anterior corpus quadrigemina as observed by v. Monakow and others. (*d*) Little or no degeneration in the posterior corpus quadrigemina. (*e*) Some, but not great degeneration in the anterior brachium of the posterior corpus quadrigemina. B. M.

THE NERVE-SUPPLY OF THE SENSE OF TASTE.

John Ferguson, M.D., L.R.C.P. (Medical News, October 18, 1890,) states that although the lingual branch of the fifth nerve and the gustatory branches of the glossopharyngeal carry the nerve-fibres of taste to the tongue and palate, it was doubtful whether these nerves were the real supply to the parts of taste, or whether they carried nerve-fibres from some other source.

One of his patients had complete loss of taste on left side of tongue, extending to the tip, but the posterior part of the tongue, fauces and palate retained the power of taste. The patient died of phthisis, and on autopsy a small exostosis was found in the scaphoid fossa pressing upon the posterior opening of the Vidian canal and by pressure destroying the Vidian nerve. The nerve degeneration could be traced along the Vidian, and thence along its two branches, the carotid and petrosus major. This latter enters the geniculate ganglion of the facial. The degeneration could be followed until the point was reached at which the chorda tympani is given off. The degeneration here left the facial and followed the chorda tympani throughout its length.